A CORPORATE FINANCE

CASH FLOW MODEL WITH FLOAT

Dr. Rodolfo Apreda

Ph.D. in Economics, University of Buenos Aires
Professor of Finance at The University of CEMA
Member of the Eastern Finance Association, United States

E-Mail : **ra@cema.edu.ar**

Abstract

In this paper we introduce a Cash Flow Model with Float so as to overcome apparent shortcomings that pervade the Standard Cash Flow Model. We deploy the complex structure the float exhibits and this allows not only for strategic financial decision making but a much more sensible use of sources and applications of expected future cash flows, as well. Furthermore, it provides with a method for building up floats. It is a distinguishing feature in this model that uncovers agency problems and costs. Besides, it gives grounds for a quantitative approach to free cash flows analysis. Prior to introducing the model, however, we derive both the Statement of Cash Flows and the Standard Cash Flow Model so as to weigh up their qualifications against the model with float.

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1.- INTRODUCTION

As the Standard Cash Flow Model is earning a place in latest Corporate Finance textbooks, like Benninga <1997>, Ross <1996> or Damodaran <1997>, we can draw from this development two remarks that commit to further analysis.

- The model is much better suited to Corporate Finance objectives than the Statement of Cash Flows, the latter still so widely used in Accountancy.

- However, the model as it is usually presented doesn't allow for financial decision making because it depends of an exhaustive allocation of cash flows from assets into main stakeholders accounts: debt and stock. We shall see that whereas this sort of allocation is a tenet of the Statement of Cash Flows on ex_post basis, it doesn't seem a realistic allocation when we engage ourselves in forecasting expected future cash flows on ex_ante basis.

What we want to do in this paper is to introduce the Cash Flow Model with Float, a model which encompasses the Standard one, but goes beyond it by including a float in the cash flows to offer enough leeway when dealing with core choices in Corporate Finance: valuation, mergers and acquisitions, investments and financing decisiones, incentives, and risk management. Last, but not least, the Float will bring quantitative grounds from which we can deal with free cash flows, as in Jensen <1986>.

In forthcoming papers we are going to develop this issue on broader terms; Apreda <1999-a; 1999-b> The model with float has already proved to be operational in coping with agency problems; see Apreda <1998>.

To expand on our proposal, we will take the following steps: firstly, we are going to analyse the cash flows as from the incremental balance sheet. Next, the Statement of Cash Flows and the Standard Cash Flow Model are derived from the incremental balance sheet. Later, advantages of the Cash Flow Model over the Statement of Cash Flows are highlighted. Then, actual shortcomings in the Cash Flow Model will pave the way to our introduction of the Cash Flow Model with Float. After that, we delve into the complex structure the float has, setting up the dynamics of uses and sources of resources coming in and out the float. Lastly, we develop a method to bring forth real floats and provide an example to follow up the model.

2.- THE CASH FLOWS AS FROM THE INCREMENTAL BALANCE SHEET

At every moment "t", it holds true that

$$\textbf{Assets(t) = Liabilities(t) + Owners'equity(t)}$$

This identity is not only the starting point for the accountant's Balance Sheet, but a basic assumption in Corporate Finance when adopting the Cash Flows approach which has become so useful in valuation and capital budgeting. Such an identity gives rise to an

accumulative statement as displayed by stock variables that is unsuitable for financial decision-making. To overcome this problem we uncover flow variables this way:

[1]

$$\Delta \text{ Assets} = \Delta \text{ Liabilities} + \Delta \text{ Owners'equity}$$

Increments, or changes, in theses variables are to be taken between the beginning and end points in a certain period. For example, if the period runs from "t-1" to "t", then

$$\Delta \text{ Assets(t)} = \text{Assets(t)} - \text{Assets(t-1)}$$

and similar relations hold good for liabilities and owners'equity.

To meet next sections objectives, however, it seems advisable to expand both sides of **[1]** a little further; for simplicity, we are going to delete dating from variables. Starting from changes in assets,

[2]

$$\Delta \text{ Assets} = \Delta \text{ Current Assets} + \Delta \text{ Fixed Assets} + \Delta \text{ Intangible Assets}$$

bearing in mind that variations in current assets are made up of the following main items:

[3]

$$\Delta \text{ Current Assets} = \Delta \text{ Cash} + \Delta \text{ Marketable Securities}$$

$$+ \Delta \text{ Accounts Receivable} + \Delta \text{ Inventories} + \Delta \text{ Other Current Assets}$$

By the same token, changes in fixed assets amount to:

$$\Delta \text{ Fixed Assets} = [\text{Fixed Assets(end)}$$

$$- \text{ Accumulated Depreciation(beginning)} - \text{Depreciation(period)}]$$

$$- [\text{ Fixed Assets(beginning)} - \text{Accumulated Depreciation (period) }]$$

where "beginning" means beginning of the period, and "end" means end of the period.

Finally, changes in fixed assets can be written in a simpler way as:

[4]

$$\Delta \text{ Fixed Assets} = \text{Fixed Assets(end)}$$

$$- \text{Fixed Assets(beginning)} - \text{Depreciation(period)}$$

Net change in intangible assets breaks down into simpler components to:

[5]

Δ Intangible Assets = Intangible Assets(end)

- Intangible Assets(beginning) - Amortization(period)

Exhibit 1

Incremental Balance Sheet

Δ Assets		**Δ Liabilities and Owner's Equity**	
Category	**Main Items in Category**	**Category**	**Main Items in Category**
Δ **Current Assets**	Δ Cash and Equivalents Δ Marketable Securities Δ Accounts Receivable Δ Inventories Δ Other Current Assets	Δ **Current Liabilities**	Δ Accounts Payable Δ Short-term Notes Payable Δ Bank Credit Lines Δ Accrued Taxes Δ Other Current Liabilities
Δ **Fixed Tangible Assets**	Δ Plant Δ Equipment Δ Land Δ Leased Property Δ Leased Equipment Δ Other Fixed Assets	Δ **Long-term Liabilities**	Δ Long-term Debt Bonds Public Offered Bonds Privately Offered Δ Long-term Leasing Δ Other Long-term Liabilities
Δ **Fixed Intangible Assets**	Δ Goodwill Δ Patents Δ Trademarks Δ Other Intangible Assets	Δ **Owner's Equity**	Δ Ordinary Stock Δ Preferred Stock Δ Retained Earnings Δ Other Owner's Equity Items

Remark:

Accounts receivable and other current assets can be thought net of reserves or provisions. Fixed assets are always net of depreciation or amortization.

On the left side in **Exhibit 1**, all these items are placed in a conventional frame that has become standard practice in Accountancy. Now, let us take **[1]** again, dealing firstly with liabilities, and later with the owners'equity:

[6]

$$\Delta \text{ Liabilities} = \Delta \text{ Current Liabilities} + \Delta \text{ Long-term Liabilities}$$

Current liabilities and long-term liabilities breaks down into their standard components:

[7]

$$\Delta \text{ Current Liabilities} = \Delta \text{ Accounts Payable} + \Delta \text{ Short-term Notes Payable} + \text{Other Current Liabilities}$$

Last of all,

[8]

$$\Delta \text{ Long-term Liabilities} = \text{Net New Debt} = \text{Liabilities(end)} - \text{Liabilities(beginning)}$$

When coping with the Cash Float Model, we are going to develop this relationship a little further, so as to fit our needs. On the other hand,

[9]

$$\Delta \text{ Owners'equity} = \text{Net New Equity} = \text{Equity(end)} - \text{Equity(beginning)}$$

On the right side of **Exhibit 1**, liabilities and equity are placed in the conventionally most frequent frame. In passing, we would like to remark that items listed in the exhibit are the most frequent and also relevant for this paper; by no means the list pretends to be exhaustive or complete. Furthermore, that's why "other-sort-accounts" come up as handy fillers.

3.- THE STATEMENT OF CASH FLOWS

The Statement of Cash Flows, a format of which can be found in **Exhibit 2**, has a widespread application in helping accountants and analysts to get a clear picture of uses and sources of funds in the company on ex_post basis for a certain accountancy period, whereas financial planners and analysts have been taking advantage of this model on ex_ante basis.

Remark:

There has been a shift from the old "uses and sources of funds" framework to an updated one, grounded on the "operations-investments-financing cycle", as from Fasb 95 Statement. Although accountants in Argentina follow the former model, we prefer in this paper the latter one because of our interest in Corporate Finance on a global setting.

The Statement of Cash Flows tracks cashflows changes matching each of them with any of the following choices:

- Operations Decisions
- Investing Decisions
- Financing Decisions

Exhibit 2 Statement of Cash Flows		
Categories	**Main Items**	**Totals**
Cash Flows From Operations	Net Income Depreciation + Amortization Change in Accounts Receivable Change in Inventories Change in Other Current Assets Change in Account Payable Change in Short-term Notes Payable Change in Other Current Liabilities Other Changes from Operations	Total Cash Flows from Operations
Cash Flows From Investing	Change in Fixed Assets Changes in Marketable Securities Other Changes from Investing	Total Cash Flows from Investing
Cash Flows From Financing	Change in Long-term Debt Change in Stock Cash Dividends Paid to Shareholders Other Changes from Financing	Total Cash Flows from Financing
Net Change in Cash Balance		
Direction of Change and Sign Convention		
Type of Account	**Increase**	**Decrease**
Assets	+ Cash Outflow	- Cash Inflow
Liabilities – Equity	- Cash Inflow	+ Cash Outflow

Briefly, the rationale behind the Statement of Cash Flows can be put, this way: "Starting from Net Income, we add together such non-cash expenses items as depreciations and amortizations; next we take into account those cash flows changes coming out from operations (exclusive of cash and equivalents), investing and financing decisions. In this

way, we should reach out for the actual change in cash and equivalents position." Let us derive this rationale, and the method itself. Firstly, by **[2]**, we have

Δ Assets = Δ Current Assets + Δ Fixed Assets + Δ Intangible Assets

on the other hand, we know by **[3]** that

Δ Current Assets = Δ Cash

+ Δ Marketable Securities + Δ Accounts Receivable + Δ Inventories

+ Δ Other Current Assets

As from now, we are going to write relationships in vertical format. In this way, we can signal, line by line, similar items or those items that should be taken into the same group. Putting **[3]** into **[2]** we obtain:

[10]

Δ Assets = Δ Cash

+ Δ Marketable Securities + Δ Accounts Receivable + Δ Inventories

+ Δ Other Current Assets

+ Δ Fixed Assets + Δ Intangible Assets

On the other hand, recalling **[6]** ,

Δ Liabilities = Δ Current Liabilities + Δ Long-term Liabilities

and we know by **[7]**

Δ Current Liabilities =

Δ Accounts Payable + Δ Short-term Notes Payable + Δ Other Current Liabilities

Putting **[7]** into **[6]** we obtain:

[11]

Δ Liabilities =

Δ Accounts Payable + Δ Short-term Notes Payable + ΔOther Current Liabilities

+ Δ Long-term Liabilities

Bringing **[10]** and **[11]** over **[1]**, we are going to make use of boxes to keep track of so many items :

[12]

Δ Cash

+ Δ Marketable Securities + Δ Accounts Receivable + Δ Inventories

+ Δ Other Current Assets

+ Δ Fixed Assets + Δ Intangible Assets

=

Δ Accounts Payable + Δ Short-term Notes Payable + Δ Other Current Liabilities

+ Δ Long-term Liabilities

+ Δ Owners'equity

Now we shift some items from the first to the second box, just those which are representative of current assets:

[13]

Δ Cash

+ Δ Fixed Assets + Δ Intangible Assets

=

- Δ Marketable Securities - Δ Accounts Receivable - Δ Inventories

+ Δ Accounts Payable + Δ Short-term Notes Payable

- Δ Other Current Assets + Δ Other Current Liabilities

+ Δ Long-term Liabilities

+ Δ Owners' Equity

We want to expand on the owner's equity item, starting from **[9]**

Δ Owners'equity = Net New Equity =

Equity(end) - Equity(beginning)

Equity at the beginning means stock plus retained earnings at the beginning. On the other hand, equity at the end means stock at the end plus former retained earnings, plus net income for that period. In net terms, this amounts to:

[14]

Δ Owners'equity =

Δ Stock + Δ Retained Earnings =

Δ Stock + Net Income - Δ Dividends

Another shift is about to take place within boxes in **[13]** , this time involving fixed assets as in **[4]** and intangible assets as in **[5]**.

[15]

Δ Cash

=

- Δ Marketable Securities - Δ Accounts Receivable - Δ Inventories
Δ Accounts Payable + Δ Short-term Notes Payable
- Δ Other Current Assets + Δ Other Current Liabilities
+ Depreciation(period)
- [Fixed Assets(end) - Fixed Assets(beginning)]
+ Amortization(period)
- [Intangible Assets(end) – Intangible Assets(beginning)]
Δ Long-term Liabilities
+ Δ Stock + Net Income - Δ Dividends

A last shuffling is required, leading us from **[15]** to the following presentation:

[16]

Δ Cash

=

Net Income
+ Depreciation(period) + Amortization(period)

+

- Δ Marketable Securities - Δ Accounts Receivable - Δ Inventories
+ Δ Accounts Payable + Δ Short-term Notes Payable
- Δ Other Current Assets + Δ Other Current Liabilities

+

- [Fixed Assets(end) - Fixed Assets(beginning)]
- **[Intangible Assets(end) - Intangible Assets(beginning)]**

+

+ Δ Long-term Liabilities
+ Δ Stock - Δ Dividends

If we compare with the Statement of Cash Flows as in **Exhibit 2,** we see that boxes in **[16]** conveys the same information.

It's worth remarking that, whereas the Statement of Cash Flows needs a plus or minus sign convention to avoid any confusion whether we face a source or an application of resources, those boxes above get rid of any convention as signs are directly attached to each item.

4.- THE STANDARD CASH FLOW MODEL

Although the Statement of Cash Flows has been a successful tool of the trade among accountants, auditors, regulators and markets analists, it shows weak points and it certainly lacks of a truly "financial frame of mind". In fact, the Financial Function, besides dealing with the "operations-investment-financing cycle", also focus attention on other problems such as:

- how to grant cash flows from assets may finally repay stakeholders,
- how to create economic value, by making sound investments decisions,
- to find out a suitable mix of private and public financing for the company,
- what sort of incentives to pick up so as to make management behave on behalf of the company's interests and not their own ones,
- how to manage financial and credit risks,
- under what restrictions management would be able to build up an effective capital structure in terms of the company's objectives.

By and large, this focus really signals an striking departure from the Statement of Cash Flows framework. That's why we prefer, in Corporate Finance, to rephrase relation **[1]** in this frame:

For any business firm it holds, at every moment "t":

[17]

$$\Delta CF_t \text{ (brought about by assets)} = \Delta CF_t \text{ (delivered to debtholders)} + \Delta CF_t \text{ (delivered to stockholders)}$$

or, briefly:

[18]

$$\Delta CF_t \text{ (assets)} = \Delta CF_t \text{ (debtholders)} + \Delta CF_t \text{ (stockholders)}$$

The message this relationship conveys is clear: incremental cash flows originated in assets are carried over debtholders and stockholders to be fully distributed between them. This approach gives rise to the Standard Cash Flows Model, which we are going to develop as we did for the Statement of Cash Flows, directly from relation **[2]** taking advantage of the analysis performed in section **2**.

Recalling **[10]**, we write it down in vertical fashion, starting with current assets to follow later with fixed and intangibles assets as translated by **[4]** and **[5]**.

[19]

$$\Delta \text{ Assets} =$$
$$\Delta \text{ Cash} + \Delta \text{ Marketable Securities} + \Delta \text{ Accounts Receivable} + \Delta \text{ Inventories}$$
$$+ \Delta \text{ Other Current Assets}$$
$$+ \Delta \text{ Fixed Assets} - \text{Depreciation(period)}$$
$$+ \Delta \text{ Intangible Assets} - \text{Amortization(period)}$$

Now we tackle the right side in **[1]** :

$$\Delta \text{ Assets} = \Delta \text{ Liabilities} + \Delta \text{ Owners'equity}$$

Before going on, it's worth analysing the cash flows associated with liabilities in a deeper way. We saw in **[8]** that:

$$\Delta \text{ Long-term Liabilities} = \text{Net New Debt} =$$
$$\text{Liabilities(end)} - \text{Liabilities(beginning)}$$

These cash flows are meant on a net basis. In fact, the internal structure of liabilities comes up as

[20]

$$\Delta \text{ Long-term Liabilities} =$$
$$\text{New Debt Issues(period)} - \text{Principal Repayments(period)}$$

And we also must pay a closer watch to retained earnings, from a financial point of view.

[21]

$$\text{Retained Earnings} + \text{Dividends} = \text{Net Income}$$

But net income comes out of some important items to be found in the income statement which is displayed in **Exhibit 3**. In fact:

$$\text{EBIT} - \text{Interest(Long-term Debt)} - \text{Taxes} = \text{Net Income}$$

Furthermore:

Exhibit 3 **Income Statement**	
Earnings from sales Minus • Costs of Goods Sold • Selling, General and Administrative Expenses • Net Short-term Interest • Depreciation and Amortization Plus • Marketable securities returns (interest or dividends) Plus(minus) • Other earnings-losses accounts Minus **Long-term Debt Interest** Minus Taxes Minus **Dividends**	**EBIT** (Earnings before interest and taxes) Earnings before taxes **Net Income** **Retained Earnings**
<u>Remark</u>: **It is a standard practice to list all ordinary earning and losses from the top of the statement downwards, leaving for the bottom part of the statement extraordinary earnings and losses. We have chosen this format because it seems much suitable to our purposes.**	

[22]

$$\textbf{EBIT} - \textbf{Interest(Long-term Debt)} - \textbf{Taxes} = \textbf{Retained Earnings} + \textbf{Dividends}$$

Which amounts to a general expression for retained earnings:

[23]

$$\textbf{Retained Earnings} = \textbf{EBIT} - \textbf{Interest(Long-term Debt)} - \textbf{Taxes} - \textbf{Dividends}$$

The stakeholders' side in **[1]** together with EBIT's analysis from **[22]** and **[23]** lead to

[24]

Δ Liabilities + Δ Owners'equity =

+ Δ Accounts Payable + Δ Short-term Notes Payable + Δ Other Current Liabilities

+ New Debt Issues(period) - Principal Repayments(period)

+ Δ Stock

+ EBIT - Interest(Long-term Debt) - Taxes - Dividends

At last, we can join both blocks, the one for the assets cash flows and the other for the cash flows claimed by stakeholders.

[24]

Δ Cash + Δ Marketable Securities + Δ Accounts Receivable + Δ Inventories

+ Δ Other Current Assets

+ Δ Fixed Assets - Depreciation(period)

+ Δ Intangible Assets - Amortization(period)

=

Δ Accounts Payable + Δ Short-term Notes Payable + Δ Other Current Liabilities

+ New Debt Issues(period) - Principal Repayments(period)

+ Δ Stock

+ EBIT - Interest(Long-term Debt) - Taxes - Dividends

The difference between the first line in the upper box and the first line in the bottom box turns out to be the net change in working capital. In fact:

Δ Working Capital = ΔCurrent Assets - ΔCurrent Liabilities

We now proceed to an arrangement between both boxes items:

- EBIT - Depreciation(period) - Amortization(period) + Taxes

+ Δ Working Capital

+ Δ Fixed Assets + Δ Intangible Assets

=

- Interest(Long-term Debt) + New Debt Issues(period)

- Principal Repayments(period)

+ Δ Stock

- Dividends

From a financial point of view, changes in the stocks come from differences between new issues and stock repurchases in the period, that is to say:

Δ Stock = New Stock Issues - Stock Repurchase

Finally, we change over signs in both boxes,

[25]

EBIT + Depreciation(period) + Amortization(period) - Taxes

- Δ Working Capital

- Δ Fixed Assets - Δ Intangible Assets

=

Interest(Long-term Debt) - New Debt Issues(period) - Principal Repayments(period)

+ Dividends + Stock Repurchase - New Stock Issues

Exhibit 4

The Cash Flows Model

Main Categories	Main Items	Changes in Items	Changes in Categories
	Ebit Plus Depreciation Minus Taxes		
Cash Flows (operative)			
	Change in Current Assets Change in Current Liabilities		
Minus Changes in Working Capital			
Minus Changes in Fixed Assets			
Change in Cash Flows From Assets			
	Interest Long-term Debt Net New Debt • Plus Principal payments • Minus New Debt Issues		
Change in Cash Flows to Debtors			
	Dividends Net New Stock • Plus Debt Repurchase • Minus New Stock Isssues		
Change in Cash Flows to Stockholders			
Change in Cash Flows to Debtors and Stockholders			

In latest Corporate Finance text-books is agreed that the operative or disposable cash flows in the period is the remainder of EBIT after substracting taxes expenses and adding depreciation and amortization (which, in fact, are not real cash expenses). For this reason:

[26]

$$\Delta \text{ CF(operative)} = \text{EBIT} + \text{Depreciation(period)} + \text{Amortization(period)} - \text{Taxes}$$

However, these cash flows shouldn't be fully distributed between stakeholders. Otherwise, the company wouldn't be able to survive, because of lacking provisions either to replenish working capital or in granting the maintenance of his fixed assets. That's why it is understood that the remainder from the operative cash flows after such provisions are the only real cash flows that assets bring about. By the way, this situation leads to core concerns on agency problems, and we deal with this in Apreda <1998>. Hence, from the upper box in **[25]** and by dating the cash flows variables,

[27]

$$\Delta CF_t \text{ (assets)} = \Delta CF_t \text{ (operative)} - \Delta CF_t \text{ (Working Capital)} - \Delta CF_t \text{ (Fixed Assets)}$$

Working now with the bottom box in **[25]** , we see that its first line lists those items that are in the direction of debtholders, by paying interest or principal, or receiving the proceeds of new debt issues. That means

[28]

$$\Delta CF_t \text{ (debtholders)} =$$

Interest(Long-term Debt) - New Debt Issues(period) + Principal Repayments(period)

Remark:

- **As the reader might have realised, Interest(Long-term Debt) is gross, inclusive of tax deduction. The Standard Cash Flow Model follows this procedure because interest is an outgoing cash flow to bondholders on a gross basis.**
- **At the same time, the company improves its cash flows from operations taking advantage of a tax deduction, and it seems sensible to leave, therefore, that deduction on the cash flows from assets.**

By the same token, the second line in the **[25]** bottom box conveys how much can be directed to stockholders as dividends or by repurchasing outstanding stock, or is received from them by new stock issues. That means

[29]

$$\Delta CF_t \text{ (stockholders)} =$$

Dividends + Stock Repurchase - New Stock Issues

And this ends with the derivation of the so called Cash Flow Model, which states:

$$\Delta CF_t \text{ (brought about by assets)} =$$

$$\Delta CF_t \text{ (delivered to debtholders)} + \Delta CF_t \text{ (delivered to stockholders)}$$

5.- ADVANTAGES OF THE STANDARD CASH FLOW MODEL OVER THE STATEMENT OF CASH FLOWS

Corporate Finance, either in theory or in practice, is not only concerned with Cash positions but with broader issues such those including firm valuation, investing and financing decisions, value creation, and corporate strategies. The Cash Flow Model addresses such key issues through two stages: firstly, by clearly stating how assets repay themselves eventually, and by making provisions for working capital and setting maintanance levels for fixed assets:

$$\Delta CF_t \text{ (assets)} = \Delta \text{ CF(operative)} - \Delta CF \text{ (Working Capital)} - \Delta CF(\text{Fixed Assets})$$

and secondly, by ruling how cash flows from assets may finally be allocated between main stakeholders.

$$\Delta CF_t \text{ (debtholders)} + \Delta CF_t \text{ (stockholders)}$$

But, definitely, forecasting and planning expected future cash flows seems the most impressive tenet in the Cash Flow Model. We need those cash flows to assess whether an investment decision is feasible or not, to ascertain if the company is creating value, to find out a marketable value for that company. To put it in other words, the model allows for intertemporal projections. And this is, by the way, core Finance.

With cash flows from assets, one period ahead, two periods ahead, and so on

$$\Delta CF_1 \text{ (assets)}, \ \Delta CF_2 \text{ (assets)}, \ \Delta CF_3 \text{ (assets)}, \ \ldots\ldots, \ \Delta CF_N \text{ (assets)}$$

we can get the present value of the stream of cash flows by discounting them with an adequate rate of discount. (See Benninga <1997> for an up-to-date valuation methodology and analysis; Apreda <1998> addresses discounting cash flows from assets taking into account the temporal structure of rates of interest)

It is worth making a final remark on the advantages of the Cash Flow Model over the Cash Flow Statement, this time in the realm of information:

In Capital Markets, informationally efficiency is value for money. Neither in quality nor in quantity have external analysts access to the same information than managers. That's why they often work on deductions and guesses. Hence, the Cash Flow Model becomes a tool of the trade that improves the informationally efficiency of outsiders. By using the model, managers also would take advantage of information within their own companies.

6.- THE CASH FLOW MODEL WITH FLOAT

In a formal setting, the Cash Flow Model states that

$$\Delta CF_t \text{ (brought about by assets)} =$$

$$\Delta CF_t \text{ (delivered to debtholders)} + \Delta CF_t \text{ (delivered to stockholders)}$$

what amounts to a complete and exhaustive allocation of cash flows from assets between debtholders and stockholders. Under this assumption, the model encompass what seems to us a removable flaw that hinders its ability to come in handily with real problems. Let's go deeply into this issue, by making the following points:

- Distributing all resources to stakeholders is not desirable because such decisiones uncover lacking of growth purposes and failure at hedging risk.

- It doesn't seem wise, as regards investing or financial innovation, to be left without any freedom to find out likely favourable chances in the markets where the company play most of its games.

- The Standard Model presentation, as in **[17]**, makes no room for highlighting expected core financial decisions: reorganization, incentives, mergers, acquisitions, financial risk management, new investments, research and development, credit risk management.

- It is well known, as from Jensen's paper on Free Cash Flows stemming from assets, that managers could be tempted into committing executive decisions on behalf of their own interests. In other words, bringing forth agency problems and costs. See Jensen <1986>

Weighing up advantages and disadvantages of the Cash Flow Model, we feel that there is latitude for improvement if we introduce a float cash flow. As from now, we are going to deal with this expanded version that we will call the "Cash Flow Model with Float",

[30]

$$\Delta CF_t \text{ (brought about by assets)} =$$

$$\Delta CF_t \text{ (delivered to debtholders)} + \Delta CF_t \text{ (delivered to stockholders)} + \Delta CF_t \text{ (float)}$$

Remark:

We have already coped with a normative float cash flows model which allows for the management of agency problems, in a paper presented at the 1998-Annual-Meeting, AAEP, Apreda <1998 >.

It's worth focusing on [30] by giving attention to some details.

- If we use the Standard Cash Flows Model as it were a Cash Flow Statement, on ex_post basis, the float will be zero

$$\Delta CF_t \text{ (float)} = 0$$

- If we use the Standard Cash Flows Model as required in Corporate Finance, we will face three relevant facts:

  - Cash flows from assets depend on growth rates to be forecasted item by item.

  - Expected cash flows to existing debt and stock are easier to assess.

  - Unless there would be neither value creation nor value destruction, the float must be significative, that is to say

$$\Delta CF_t \text{ (float)} \neq 0$$

Summing up: we have to take into account float cash-flows. In section 9 we will put numbers to follow up these statements.

Remark:

In a forthcoming issue of Cema Working Papers, we are going to deal with the relationship between Eva Model and the Float Model. Apreda <1999-b>.

7.- THE FLOAT STRUCTURE

The float exhibits a complex structure. Let us highlight its most important components, briefing shortly on their main features.

- ***Sinking Fund for sunk costs: ΔCF_t (sunk costs)***

Because sunk costs coming from any investment project don't mean incremental cash flows for that project, they should not be taken into account for that project valuation. How are sunk costs then financed? In recent Corporate Finance textbooks we find this sort of statement as a rule of thumb: "it is the firm which funds any investment project sunk costs with the net present value from the succesful investment projects". It may be worthy of reading chapter 8 in Damodaran <1997>. The float seems the most suitable place to allocate this sinking fund.

- ***Strategic Investment Decisions: ΔCF_t (strategic investments)***

Strategic investment cash flows display a complex structure whose main components are:

[31]

$$\Delta CF_t \text{ (strategic investments)} = \Delta CF_t \text{ (future diversifications)} + \Delta CF_t \text{ (future mergers and acqusitions)} + \Delta CF_t \text{ (future reorganizations)} + \Delta CF_t \text{ (future capital investments)}$$

All these items bring pressure to bear on strategic decisions and it is for the float to deal with them.

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- ***Sinking Fund to capital assets replacement: DCF_t (fixed assets replacement)***

It is a widespread practice to allow for fixed assets consumption by writing off periodic amounts from books as depreciation charges against each period. When the replacement time comes up eventually, it is assumed that a new investment project must be undertaken. Against the conventional wisdom, we should manage a sinking fund to match on due schedule any replacement need. Where may those resources come from? From the float, and by means of a porfolio of financial assets built up with the float allocations. These cash flows, however, have nothing to do with the cash flows provisions to fixed assets for each period that the standard model requires as a way of planning fixed assets or working capital needs for the period in the realm of tactical decisions. Instead, we are interested here in strategic decisions regarding future capital budgeting.

- ***Sinking Fund for Non-operative Disposable Treasury: DCF_t (Treasury)***

This is quite a sensitive float component to agency costs, and managers may allocate their positive balances to substandard projects so as to avoid dividends distribution or, still worse, to get rid of the capital markets monitoring in case good prospective projects were to be financed by debt issues. Treasury superavits are explained by liquidity and transaction reasons. To make feasible disposable balances in Treasury should be advisable to set up a portfolio of financial assets with this specific purpose. On the other hand, it would be a mistake to assimilate these strategic cash flows to those the standard model leave aside to meet working capital needs for any period. A similar remark to what we did on fixed assets replacement is sensible here.

- ***Sinking Fund for management and directory motivation through issuance of financial assets: DCF_t (incentives)***

This item conveys a sensitive political meaning in corporate finance governance, mainly when the Board of Directors work on behalf of the CEO. Financial Engineering is frequently used to provide management with incentives. The main instruments are warrants over stock, convertible bonds, or selling of stock contingent upon performance. Still a good point for this issue is Barnea, Haugen y Senbet <1985>. An updated development is to be found in chapter 15 of Damodaran's book <1997>. On corporate governance, Monks-Minow <1995> seems still to be the best.

- ***Risk management : DCF_t (interest rate risk), DCF_t (commodities risk), DCF_t (credit risk), DCF_t (foreign exchange risk)***

Either transaccional or economic risk profiles threaten companies all around the world. This is a growing concern and commits huge volumes of traded financial derivatives to hedge financial risks. Awareness on risk management has been broadening as long as the economy becomes global and interdependent; a good source is Smith-Smithson-Willford

<1995>. Credit risk has definitely to be regarded as a float component because likely changes in credit ratings can backfire on the company's expected cash flows.

- ***Sinking Fund for bonds covenants: DCF_t (bonds covenants)***

Covenants usually draw a boundary to management power, by limiting their decision making. We can give some examples to show the way this can be accomplished: the company is not able to buy or sell certain assets, it can't enter in merger or acquisitions processes, it must keep some financial ratios within predetermined strips of values, it ought not to issue new bonds, it must not improve the incentives system, and so on. All these limitations hold true until bonds maturity, and are contingent upon debtholders further agreements .

Remark:

For the last two decades, private placements and institutional investors activism have included sinking funds when issuing bonds, aimed to play on the investors' safest side.

Summing up, next exhibit shows the float model structure.

Float Model Structure

[32]

$$\Delta CF_t(\text{float}) = \Delta CF_t(\text{sunk costs}) + \Delta CF_t(\text{strategic investments}) + \Delta CF_t(\text{fixed assets replacement}) + \Delta CF_t(\text{Treasury}) + \Delta CF_t(\text{incentives}) + \Delta CF_t(\text{rate of interest risk}) + \Delta CF_t(\text{foreign exchange risk}) + \Delta CF_t(\text{commodities risk}) + \Delta CF_t(\text{credit risk})) + \Delta CF_t(\text{bonds covenants})$$

Last, but not least, the Float Model Structure as in [32] shows a wide variety of agency problems and agency costs most frequent sources. This subject has already been developed by Apreda <1998>.

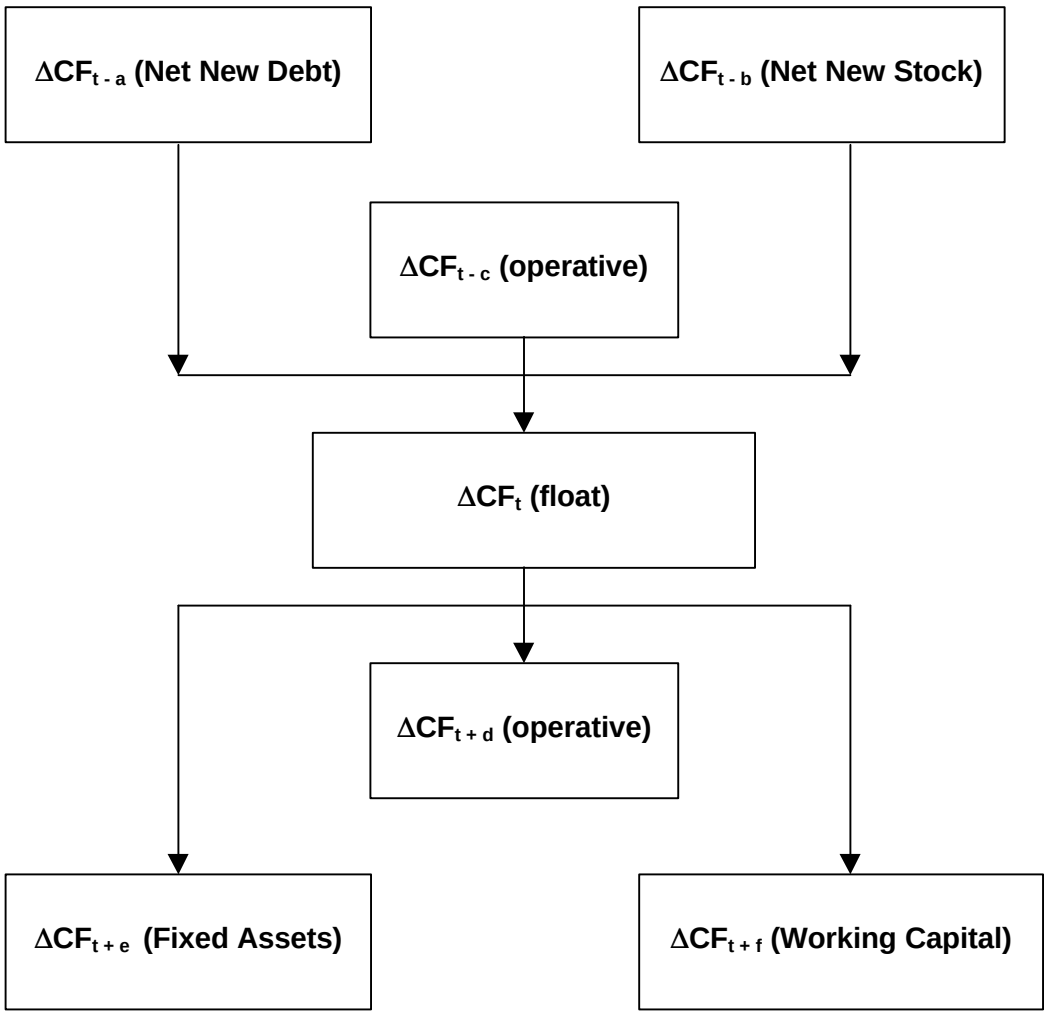
8.- FLOAT SOURCES AND USES

Where do the float components come from? Where do the float components go to eventually? To uncover this dynamics we suggest to regard the float as a strategic decision-making centre. As such, the float manages its own sources and application of cash flows, on intertemporal basis. Let us pick up an example, supposing we need to sink funds to meet a future asset replacement:

- Cash flows from assets, exclusive of already committed cash flows to stakeholders, may provide us with resources to set aside for installments.

- If that were not possible, we would draft an allocation of resources to new debt or new stock issuances.

In section 10 an example will be developed to follow up the model. Next diagram may be helpful to understand the whole float dynamics.



We remark here on the notation used in boxes above for cash flows.

- t - a, t - b, t - c : they mean that ΔCF_t (float) could have been nurtured by decisions made in earlier periods. In case they were made in the current period "t", we would have a = b = c = 0.

- t + d, t + e, t + f : they mean that ΔCF_t (float) could nurture decisions and assessments to be made in later periods. In case they were made in the current period "t", we would have d = e = f = 0.

9.- BUILDING UP FLOATS

There are many ways to make explicit the float. Let us pick up some of them as illustrations of a general method to follow. In all cases, we are going to deal with expected future cash flows and not with ex_post variables.

a) A float whose source lies in the cash flows from operations

Firstly, we join [28] and [29] to get a convenient expression to cash flows directed to main stakeholders, as assessed for next period:

$$\Delta CF_{t+1}\text{ (debtholders)} + \Delta CF_{t+1}\text{ (stockholders)} =$$

$$\text{Interest(Long-term Debt; t+1) - New Debt Issues(t+1) + Principal Repayments(t+1)}$$

$$+ \text{ Dividends(t+1) + Stock Repurchase(t+1) - New Stock Issues(t+1)}$$

which is equivalent to

[33]

$$\Delta CF_{t+1}\text{ (debtholders)} + \Delta CF_{t+1}\text{ (stockholders)} =$$

$$\text{Interest(Long-term Debt; t+1) + Net New Debt(t+1)}$$

$$+ \text{ Dividends(t+1) + Net New Stock(t+1)}$$

These are cash flows to be assessed within a reasonable range of accuracy. In fact, management can forecast new debt or stock issues; knows fairly well either capital markets forecasts or credit rating agencies statements; and has a direct access to covenants in the company own bonds indentures. It's time for going to assets and take advantage of [27].

$$\Delta CF_{t+1}\text{ (assets)} = \Delta CF_{t+1}\text{ (operative)}$$

$$- \Delta CF_{t+1}\text{ (Working Capital)} - \Delta CF_{t+1}\text{ (Fixed Assets)}$$

It is not so easy to deal with these components, mainly with the cash flows from operations, because it involves assessing EBIT which depends on expected sales level. But we can estimate which level of EBIT would balance the liabilities and owners'equity side of the model. Let us suppose such a breakeven EBIT is

$$\text{EBIT(breakeven; t+1)}$$

Remarks:

- **Balance and Net Income assessments lead to the following equation to solve for EBIT:**

$$\text{Net Income} = [\text{ EBIT} - \text{Interest(Long-term Debt)}] \text{ . (1 - tax rate)}$$

- **This is the breakeven EBIT. Furthermore, with such an EBIT it follows the breakeven sales level so as to square the income statement. Most costs items are usually assessed as percentages from sales.**

Next, we can ask managers their most likely assessment of EBIT for the incoming period

EBIT(t+1)

Supposing the assessed EBIT were higher than the breakeven EBIT we could build a float from the their difference or, still better, the difference of operative cash flows, in this way:

ΔCF_{t+1} **(operative; assessed)** - ΔCF_{t+1} **(operative; breakeven)** = ΔCF_{t+1} **(float)**

That is to say

[34]

EBIT(t+1) - Taxes(t+1) - Depreciation(t+1) =

EBIT(breakeven;t+1) -Taxes(breakeven;t+1) - Depreciation(t+1) + ΔCF_{t+1} **(float)**

that allows us to embed [33] into [27] to get

[35]

EBIT(breakeven;t+1) - Taxes(breakeven;t+1) - Depreciation(t+1) + ΔCF_{t+1} **(float)**

- ΔCF_{t+1} **(Working Capital) -** ΔCF_{t+1} **(Fixed Assets) =**

Interest(Long-term Debt; t+1) + Net New Debt(t+1)

+ Dividends(t+1) + Net New Stock(t+1) + ΔCF_{t+1} **(float)**

It's worthy of remark that we can use the cash flow model only with the break even EBIT, so the float must lay in both sides. Last of all, retaking the real EBIT assesment, we conclude:

[36]

EBIT(t+1) - Taxes(t+1) - Depreciation(t+1)

- ΔCF_{t+1} **(Working Capital) -** ΔCF_{t+1} **(Fixed Assets) =**

Interest(Long-term Debt; t+1) + Net New Debt(t+1)

+ Dividends(t+1) + Net New Stock(t+1) + ΔCF_{t+1} **(float)**

In compact format this amounts to:

$$\Delta CF_{t+1} \text{ (brought about by assets)} =$$

$$\Delta CF_{t+1} \text{ (to debtholders)} + \Delta CF_{t+1} \text{ (to stockholders)} + \Delta CF_{t+1} \text{ (float)}$$

which is the Cash Flow Model with float.

b) A float whose source lies in the cash flows from net new debt

Let us suppose that we need to build up a float when assessing next period cash flows, but this time EBIT becomes not so good a source to use. The cash flow model allows as

$$\Delta CF_{t+1} \text{ (brought about by assets)} =$$

$$\Delta CF_{t+1} \text{ (delivered to debtholders)} + \Delta CF_{t+1} \text{ (delivered to stockholders)}$$

and recalling the structure of cash flows delivered to debtholders by [28]

$$\Delta CF_{t+1} \text{ (brought about by assets)} =$$

$$\text{Interest(Long-term Debt; t+1) - New Debt Issues(t+1) + Principal Repayments(t+1)}$$

$$+ \Delta CF_{t+1} \text{ (delivered to stockholders)}$$

But we are interested in assessing New Debt Issues(t+1) in a realistic setting, with no other changes in the remaining assessed cash flows. Therefore, we make the following choice:

$$\Delta CF_{t+1} \text{ (brought about by assets)} =$$

$$\text{Interest(Long-term Debt; t+1) + Principal Repayments(t+1)}$$

$$- \text{ New Debt Issues(break even;t+1)} - \Delta CF_{t+1} \text{ (float)}$$

$$+ \Delta CF_{t+1} \text{ (delivered to stockholders)} + \Delta CF_{t+1} \text{ (float)}$$

and the expression for the assessed level of debt will be:

$$\Delta CF_{t+1} \text{ (brought about by assets)} =$$

$$\Delta CF_{t+1} \text{ (to debtholders)} + \Delta CF_{t+1} \text{ (to stockholders)} + \Delta CF_{t+1} \text{ (float)}$$

which is again the Cash Flow Model with float.

10.- AN EXAMPLE TO FOLLOW UP THE MODEL

The worked example placed after the references aims to put numbers into the former framework Bearing this in mind, both informative Income Statement and Balance Sheet are reported, to be followed by the Statement of Cash Flows and the Standard Cash Flows Model. Last of all, a Cash Flow Model with float is included.

11.- CONCLUSIONS

- The Standard Cash Flow Model has virtually superseded the Statement of Cash Flows because of its focus on real Corporate Finance variables.

- However, the Standard Cash Flow Model shows an inherent flaw: it claims that the whole of cash flows from assets should be distributed between debtholders and stockholders.

- Unless we could remove such a flaw in the Standard Model, we wouldn't be able to deal with core financial decision making, such as incentives, future investments, reorganization, sunk costs, capital assets replacement, risk management, mergers and acquisitions, just to give a short account of the main items involved.

- The Cash Flow Model with float removes such a hindrance, bringing leeway to cope with core financial decision making, within an intertemporal framework.

- We have exhibited the complex structure the float conveys so as to make easier the task of dealing with facts and figures.

- In the paper, the float has been regarded as a decision making centre, managing an active dynamics between sources and applications of expected cash flows.

- We have also shown an explicit method for bringing forth actual floats.

- Last of all, the model give quantitative measure of free cash flows.

12.- REFERENCES

Apreda, R. ; 1998. A Cash Flows Model with Float to Manage Agency Problems. Paper presented at the *33° Annual Meeting of the Argentine Economic Association Meeting*, Mendoza, Argentina.

Apreda, R. ; 1999-a. Financial Engineering for the Cash Flows Model with Float. *Working Papers; The University of Cema*; forthcoming in first semester.

Apreda, R. ; 1999-b. Eva, Ebo and the Cash Flows Model with Float. *Working Papers; The University of Cema*; forthcoming in second semester.

Barnea, A.; Haugen, R.; Senbet, L.; 1985. Agency Problems and Financial Contracting. Prentice-Hall, New Jersey, USA.

Benninga, S.; Sarig, O.; 1997. Corporate Finance: A Valuation Approach. McGraw Hill, New York.

Damodaran, A.; 1997. Corporate Finance: Theory and Practice. Wiley, New York.

Emery, D; Finnerty, J; 1992. A Review of Recent Research Concerning Corporate Debt Provisions. *Financial Markets, Institutions and Instruments*; vol.1; N° 5; New York University Solomon Center, New York.

Jensen, M.; 1986. Agency Costs of Free Cash Flow, Corporate Finance and Takeovers *The Economic Review,* May, vol. 76, N° 2 .

Monks, R.; Minow, N.; 1995. Corporate Governance. Blackwell, Cambridge.

Ross, S.; Westerfield, R. ; Jaffe, J. ; 1996. Corporate Finance. Irwin, New York

Smith, C.; Warner, J.; 1979. On Financial Contracting: An Analysis of Bond Covenants. *Journal of Financial Economics*; Vol.7; p.117-161.

Smith, C.; Smithson, C.; Willford, S.; 1995. Managing Financial Risks. Irwin, Chicago.
Sundaresan, S.; 1997. Fixed Income Markets and their Derivatives. South-Western College Publishing, Thomson Group, Ohio.

Following Up the Model with an Example
Statement 1

POTUS CORPORATION

Income Statement
For the Year Ended Dec.31,1999

	1999	1998
Sales	3,850,000.00	3,432,000.00
Cost of Goods Sold	3,250,000.00	2,864,000.00
Gross Profit	600,000.00	568,000.00
Selling and Administrative Expenses	330,300.00	240,000.00
Fixed Expenses	100,000.00	100,000.00
Depreciation Expenses	20,000.00	18,900.00
Return Earned from Short-term Assets	12,397.10	8,997.52
Interest Paid for Current Liabilities	52,824.00	40,849.00
EBIT (Earnings before Interest and Taxes)	**109,273.10**	**209,100.00**
Interest Paid for Long-term Debt	42,800.00	38,000.00
Earnings Before Taxes	66,473.10	171,100.00
Taxes @ 40%	26,589.24	68,440.00
Net Income	**39,883.86**	**102,660.00**

Notes

Interest Paid for Long-Term Debt:
In 1998 an oustanding bullet bond, semestral coupon rate: 10 %
In 1999 a bond will be issued in june, first coupon in December, semestral coupon rate: 12 %

Return from Short-term Assets:
In 1998 the portfolio return was 8%
In 1999 the portfolio return is expected to be 10 %

Current Liabilities Average Financial Cost:
In 1997 the average financial rate was 10%
In 1998 the average financial rate was 12 %
The Standard Cash Flow Model splits up interest on current liabilities from interest on long-term liabilities so as to deliver gross interest to debtholders

Breakeven EBIT:
From Net Income = [EBIT - Interest(Long-term Debt)] x (1 - tax rate) solve for EBIT
Further, get breakeven sales. Costs are assessed as percentages from sales.

Statement 2

POTUS CORPORATION

Balance Sheet
As for the Year Ended Dec.31, 1999

Assets	**1999**	**1998**
Cash and Equivalents	61,500.00	57,600.00
Marketable Securities	123,971.00	112,469.00
Accounts Receivable	342,000.00	351,200.00
Inventory	796,000.00	715,200.00
Total Current Assets	1,323,471.00	1,236,469.00
Plant and Equipment	527,000.00	491,000.00
Accumulated Depreciation	166,200.00	146,200.00
Net Fixed Assets	360,800.00	344,800.00
Total Assets	**1,684,271.00**	**1,581,269.00**
Liabilities and Owner's Equity		
Accounts Payable	175,200.00	145,600.00
Short-term Notes Payable	125,000.00	96,890.00
Other Current Liabilities	140,000.00	166,000.00
Total Current Liabilities	440,200.00	408,490.00
Long-term Debt	450,000.00	380,000.00
Total Liabilities	890,200.00	788,490.00
Common Stock	560,000.00	560,000.00
Retained Earnings	234,071.00	232,779.00
Total Shareholder's Equity	794,071.00	792,779.00
Total Liabilities and Owner's Equity	**1,684,271.00**	**1,581,269.00**

Notes Estimates for 1999 are made on the best available grounds at the reach of managers

Statement 3

POTUS CORPORATION

Cash Flow Model
As for the Year Ended Dec.31, 1998

EBIT	109,273.10	
plus Depreciation	20,000.00	
minus Taxes	(26,589.24)	
Cash-flows(operative)		102,683.86
Change in Current Assets	87,002.00	
Change in Current Liabilities	31,710.00	
minus Change in Working Capital		(55,292.00)
minus Change in Fixed Capital		(36,000.00)
Change in Cash Flows from assets		11,391.86
Interest Long-term Debt	42,800.00	
plus Principal Payments		
minus New Debt Issues		
Net New Debt	(70,000.00)	
Change in Cash Flows to Debtors		(27,200.00)
Dividends	38,591.86	
plus Debt Repurchase		
minus New Stock Issues		
Net New Stock		
Change in Cash Flows to Stockholders		38,591.86
Change in Cash Flows to Debtors and Stockholders		11,391.86

Consistency

1.- Net Income:
Net Income = Retained Earnings + Dividends = EBIT - Interest(Long-term Debt) - Taxes
In the example: Net Income = 39.883,86

2.- Cash Flows from Operations:
EBIT - Taxes + Depreciation = [Retained Earnings + Depreciation] + [Interest + Dividends]
In the example: 102.683,86 = 21.292 + 81.391,86

3.- Changes in Working Capital and Fixed Assets:
Changes in Working Capital + Changes in Fixed Assets = 55.292 + 36.000 = 91.292

4.- Sources for Working Capital and Fixed Assets changes:
Retained Earnings + Depreciation + New Debt = 1.292 + 20.000 + New Debt = 91.292
from where New Debt = 70.000

5.- Changes in Cash Flows from Assets:
Cash Flows from Operations - Changes in Working Capital - Changes in Fixed Assets
Changes in Cash Flows from Assets = 11.391,86

6.- Source of Changes in Cash Flows from Assets:
EBIT x (1 - tax rate) + Depreciation + Interest(Long-term Debt) x tax rate = 102.683,86
EBIT x (1 - tax rate) + Depreciation = 85.563,86
Interest(Long-term Debt) x tax rate = 17.120
EBITx(1-tax rate) + Depreciation - Changes Working Capital and Fixed Assets = - 5.728,14
Changes in Cash Flows from Assets = 17.120 - 5.728,14 = 11.391,86

Statement 4

POTUS CORPORATION

Cash Flow Model with Float
As for the Year Ended Dec.31, 1999

EBIT	250,000.00	
plus Depreciation	20,000.00	
minus Taxes	(69,600.00)	
Cash-flows(operative)		200,400.00
Change in Current Assets	87,002.00	
Change in Current Liabilities	31,710.00	
minus Change in Working Capital		(55,292.00)
minus Change in Fixed Capital		(36,000.00)
Change in Cash Flows from assets		109,108.00
Interest Long-term Debt	42,800.00	
plus Principal Payments		
minus New Debt Issues		
Net New Debt	(70,000.00)	
Change in Cash Flows to Debtors		(27,200.00)
Dividends	38,591.86	
plus Debt Repurchase		
minus New Stock Issues		
Net New Stock		
Change in Cash Flows to Stockholders		38,591.86
Change in Cash Flows from Float		97,716.14
Change in Cash Flows to Debtors, Stockholders and Float		109,108.00

Notes Ebit 1999 estimates here it comes from the best assesment at the reach of managers.

Structure of the Float:

Sinking Fund for a 2003 new plant	55,000.00
Sinking Fund to sunk costs	15,000.00
Risk Management on commodities	10,000.00
Sinking Fund to Warrants issuance for managers motivation	10,000.00
Strategic Investment: reorganization expected for 2001	7,716.14

Statement 5

POTUS CORPORATION

Statement of Cash Flows
As for the Year Ended Dec.31, 1999

Cash Flows from Operations		
Net Income	39,883.86	
Depreciation Expense	20,000.00	
Change in Accounts Receivable	9,200.00	
Change in Inventories	(80,800.00)	
Change in Accounts Payable	29,600.00	
Change in Short-term Notes Payable	28,110.00	
Change in Other Current Liabilities	(26,000.00)	
Total Cash Flows from Operations		19,993.86
Cash Flows from Investing		
Change in Plant & Equipment	(36,000.00)	
Change in Marketable Securities	(11,502.00)	
Total Cash Flows from Investing		(47,502.00)
Cash Flows from Financing		
Change in Long-term Debt	70,000.00	
Cash Dividends Paid to Shareholders	(38,591.86)	
Total Cash Flows from Financing		31,408.14
Net Change in Cash Balance		3,900.00